FIG. 1

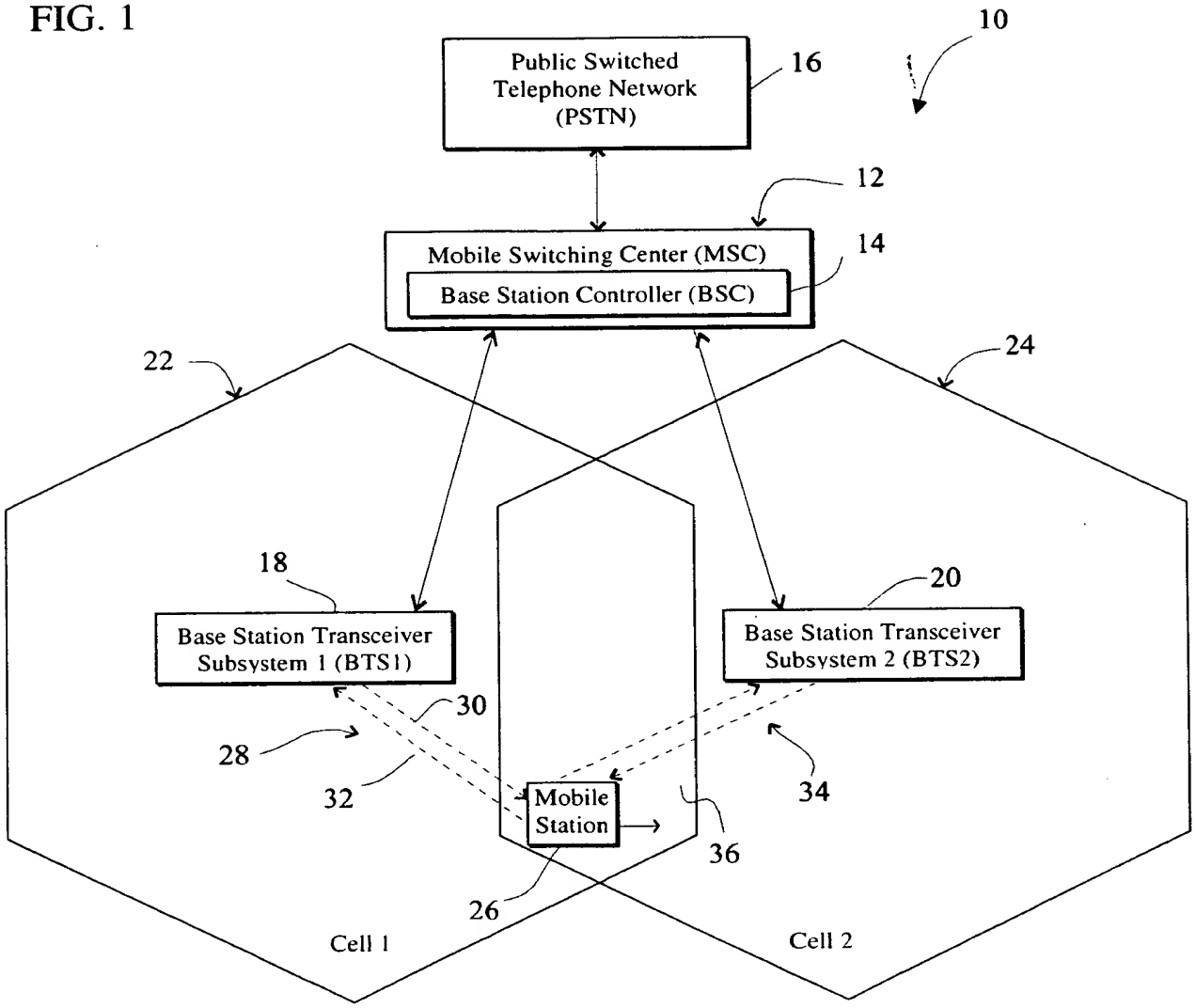

10
Public Switched Telephone Network (PSTN)
16
12
Mobile Switching Center (MSC)
Base Station Controller (BSC)
14
22
24
18
20
Base Station Transceiver Subsystem 1 (BTS1)
Base Station Transceiver Subsystem 2 (BTS2)
30
28
32
34
Mobile Station
36
26
Cell 1
Cell 2

FIG. 2

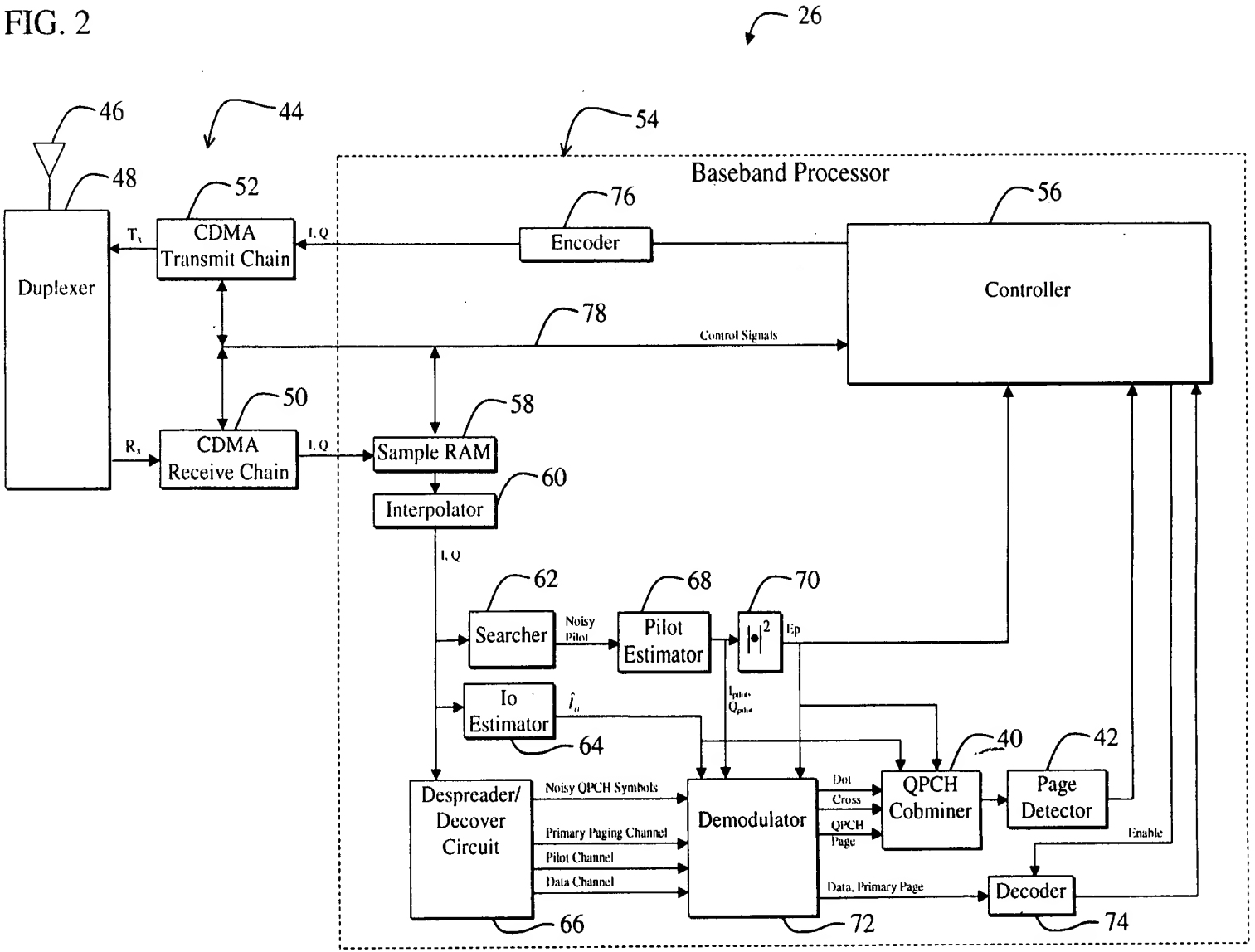
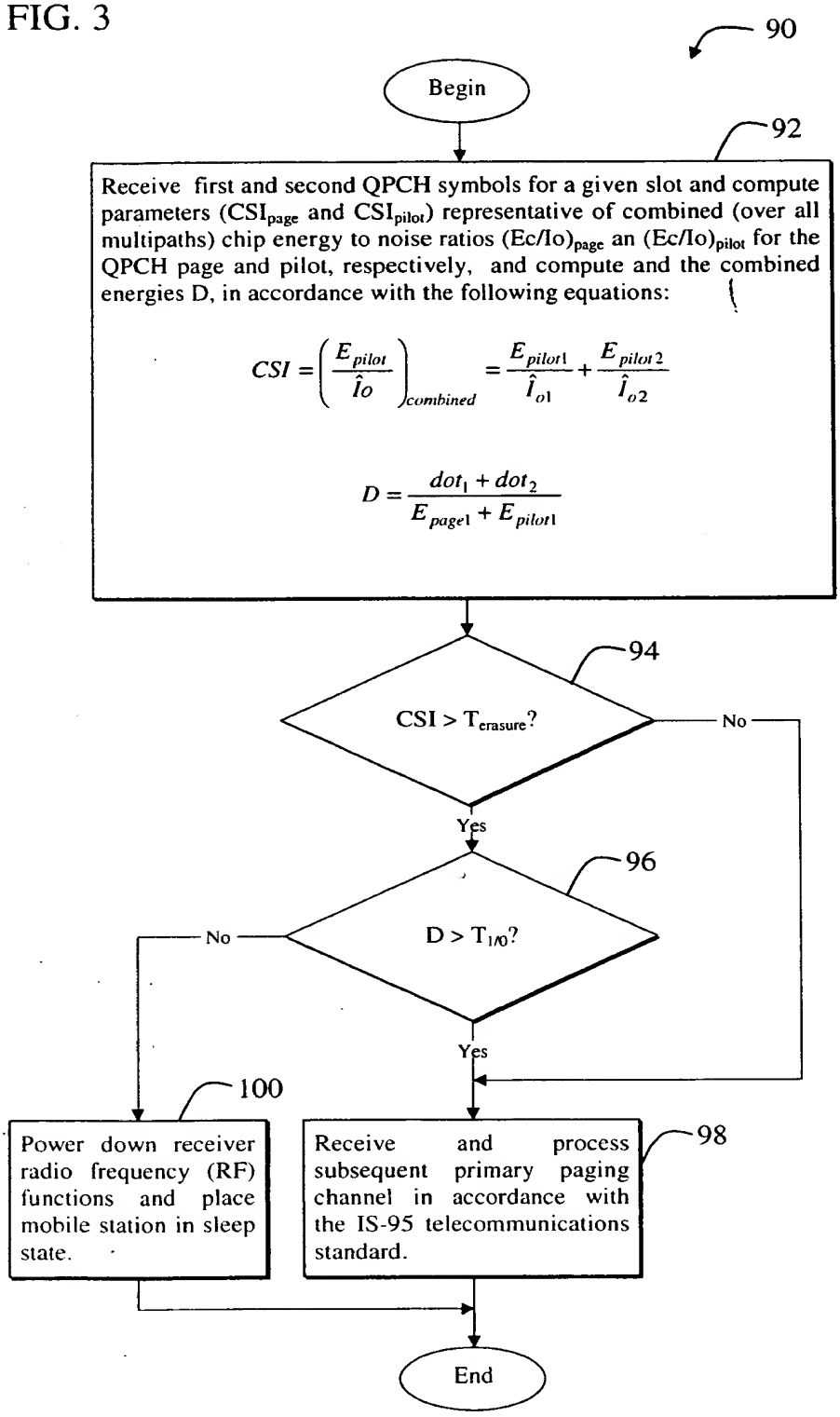

26
46
44
54
48
52
Baseband Processor
76
56
Duplexer
T_x
CDMA Transmit Chain
I,Q
Encoder
Controller
78
Control Signals
50
58
R_x
CDMA Receive Chain
I,Q
Sample RAM
60
Interpolator
I,Q
62
68
70
Searcher
Noisy Pilot
Pilot Estimator
$|\bullet|^2$
Ep
Io Estimator
$\hat{I}_o$
I_{pilot}
Q_{pilot}
64
40
42
Despreader/ Decover Circuit
Noisy QPCH Symbols
Primary Paging Channel
Pilot Channel
Data Channel
Demodulator
Dot
Cross
QPCH
Page
QPCH Cobminer
Page Detector
Enable
Data, Primary Page
Decoder
66
72
74

FIG. 3


90
Begin
92
Receive first and second QPCH symbols for a given slot and compute parameters (CSI_{page} and CSI_{pilot}) representative of combined (over all multipaths) chip energy to noise ratios $(Ec/Io)_{page}$ an $(Ec/Io)_{pilot}$ for the QPCH page and pilot, respectively, and compute and the combined energies D, in accordance with the following equations:
$$CSI = \left(\frac{E_{pilot}}{\hat{I}o}\right)_{combined} = \frac{E_{pilot1}}{\hat{I}_{o1}} + \frac{E_{pilot2}}{\hat{I}_{o2}}$$
$$D = \frac{dot_1 + dot_2}{E_{page1} + E_{pilot1}}$$
94
CSI > $T_{erasure}$?
No
Yes
96
D > $T_{I/O}$?
No
Yes
100
Power down receiver radio frequency (RF) functions and place mobile station in sleep state.
98
Receive and process subsequent primary paging channel in accordance with the IS-95 telecommunications standard.
End